

WHAT LOCAL COUNCILS NEED TO KNOW ABOUT 5G TECHNOLOGY AND THE GOVERNMENT'S PLANS TO RELAX LOCAL INFRASTRUCTURE LAWS FOR 5G

Reforms to planning laws have been proposed whereby telecom companies will be permitted to install masts and electronic communications infrastructure on protected and unprotected land without the need for prior approval, while the public will be denied the right to object to such installations. These reforms are intended to speed up the rollout of 5G across the UK.¹

5G wireless technology will support artificial intelligence, a network of 'smart' appliances in homes and 'smart' cities, driverless cars and virtual reality. But will this technological revolution make our world better or worse?

Significant points

- 5G will involve substantially increased emissions of pulsed, high-frequency electromagnetic radiation (EMR). The intention is to roll 5G out without independent strategic health or environmental impact assessments and without public consultation.
- Frequencies approaching millimetre waves (above 30 GHz in the electromagnetic spectrum) will piggy-back on existing 4G signals as the 5G network evolves. These frequencies have short wavelengths and do not travel far, so mini base-stations with small cell antennas will be required every 100–200m to ensure full 5G coverage.
- Antennas will be mounted on lamp posts, traffic lights, public buildings etc. Under the proposed planning reforms the public will not be able to object to these installations.
- The current 4G signal works by providing blanket coverage of an area. 5G will be much more targeted, working on a 'phased array' system which transmits millions of high intensity beams, locking on to and tracking 5G-enabled devices.
- According to a report commissioned by the European Parliament Committee on Industry, Research and Energy, increased public exposure to EMR will result not only from the additional higher frequencies but also from the aggregation of different signals and complex interaction effects, especially in dense urban areas.²
- It has been widely claimed that radiofrequency (RF) EMR, being non-ionising, does not damage DNA. This has now been proven to be wrong. RF EMR causes DNA damage through oxidative stress, similar to near-UV radiation – which was also long thought to be harmless.³

- The harmful effects of RF EMR on biological systems have been extensively documented. Scientists warn that 5G will be particularly dangerous due to the large numbers of antennas that will be deployed, the high energy outputs needed to ensure penetration and the extraordinarily high pulsation levels involved⁴. No safety testing has been carried out ahead of the roll-out.
- International safety guidelines for EMR exposure have (effectively) been set by the telecoms industry. They are 20 years old and hundreds of thousands of times higher than levels at which harmful biological and health effects have been reported.⁵
- Scientists with industry ties hold key positions in national and international health agencies that provide public health advice on wireless technology (Public Health England, the World Health Organisation etc.). This advice disregards independent research showing EMR to be harmful to both humans and the environment.⁶
- An appeal for a moratorium on the roll-out of 5G has gained more than 153,000 signatories, a high proportion of which are scientists and doctors.⁷
- The higher frequencies planned for use in 5G cannot pass through trees or their canopies. Larger masts (over 25m high) will therefore be constructed to ensure a clean line of sight between base stations. More than 400,000 ‘super masts’ are planned for rural areas.⁸
- If the reforms are adopted, prior approval for deployment of 5G infrastructure within conservation areas and on listed buildings, in AONBs, areas defined within the Wildlife and Countryside Act (1981), national parks and World Heritage sites, will no longer be required. An increasingly unsightly network of 5G infrastructure will at best severely compromise, and at worst destroy the beauty of the British landscape.
- Concerned citizens are justifiably worried about the potential devaluation of their homes. It is currently believed that properties near masts can be devalued by as much as 20 per cent.
- To expose people to mandatory radiation 24/7 constitutes an unprecedented violation of human rights. No public consultation on the 5G experiment has been conducted, and no public consent has been obtained – ‘informed’ or otherwise. This breaches the Nuremberg Code and Article 7 of the United Nations’ International Covenant on Civil and Political Rights, which explicitly prohibits medical and scientific experimentation without consent.
- Re the Equality Act 2010 (Section 149): Higher levels of EMR from 5G base stations will disproportionately affect babies and young children who absorb more radiation than adults, and are more likely to suffer biological effects from exposure. Other vulnerable groups include pregnant women and fetuses and

electrosensitive individuals. According to research carried out by the charity ES-UK there are currently more than 435,000 people in the UK who are so sensitised to existing levels of EMR that they are unable to work.⁹

- Leading insurers, including Lloyds of London syndicates, will not cover health risks from mobile phones, wifi or other sources of EMR radiation.¹⁰
- The 20,000 satellites needed to support 5G will require more than 300 launches, adding considerably to carbon emissions and ozone depletion. As the life span of 5G satellites is just five years, these launches will need to be repeated at regular intervals.
- Last year 24 international environmental experts, including Professor William Sutherland (Chair of the British Ecological Society), identified 5G as one of the top 15 emerging threats to global conservation and biological diversity.¹¹
- Olle Johansson, former head of The Experimental Dermatology Unit, Department of Neuroscience, Karolinska Institute, and former adjunct professor of The Royal Institute of Technology, Sweden, states:

“The collective evidence we can draw from the current scientific status regarding adverse health and biological effects of artificial electromagnetic field exposures, such as from cell phones, antennas/base stations, TV and radio towers, baby alarms, smart meters, powerlines, and WiFi routers, [indicates] that we may be jeopardising more than our own health and behaviour. Bacteria, plants, birds, frogs, and pollinating insects may all be targeted, and it is obvious we must proceed with the highest caution before immersing the citizens and our wildlife in more and more artificial electromagnetic fields. We may, as a matter of fact, already be gravely endangering our current as well as coming generations. To not act today may prove a disaster tomorrow, and such lack of action may again result in the classical “late lessons from early warnings”, or – even worse – “too late lessons from early warnings”¹²

Some Introductory Videos on 5G

A group of independent European journalists have produced this introductory two-minute video on 5G:

<https://www.youtube.com/watch?v=JKaoLxw0qJI&feature=youtu.be>
Investigate Europe

A senior tech insider – the former Microsoft President for Canada – has spoken out against 5G in a ten-minute video. This is significant because industry spokespeople normally emphasise the supposed benefits of 5G, but fail to mention the many disadvantages.

<https://www.youtube.com/watch?v=h4TdY344Now>

References

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